UTILITIES SERVICES

General: This section covers the process of tying into an Installation's existing utility systems for a range project. These systems may include water, sewage, telephone, fiber optics, power, or natural gas. Each of these must be coordinated with the customer on their desires, the provisions of the DD 1391, and the person responsible for payment.

Power.

a. The first consideration on every utility is the length of connection. The range project (funded by DAMO-TR) will not pay to upgrade or power an entire section of an Installation in order to power a range project. The range project will pay for a "short" run of poles and power lines to bring adjacent power service to the range site. The definition of "short" has been agreed upon by the Pentagon organizations involved in Military Construction (MCA); these organizations are DAMO-TR (range proponent) and ACSIM (MCA proponent). The designer should contact the Range & Training Land Program, Mandatory Center of Expertise (RTLP MCX) to obtain the latest definition of "short." If the distance to existing power is longer than the agreed definition of "short," then the Installation must submit a separate DD 1391 to increase its power structure or must look at using generated power for the range. Generators may be less expensive than power lines, but do not run as efficiently unless kept under load. The designer must keep the generator load issue in mind during design due to the limited long-term load that a range develops.

b. The power level must also be taken into consideration. Normally, the range project will not fund increasing an Installation's single-phase service to a three-phase service. The Installation must address this issue.

c. Three phase primary electrical service will be extended to the range site. Electrical power distribution will conform to the AEI and TM 5-811-1. Voltage regulation and/or metering may be required. The voltage supplied must be maintained within 5 percent at a frequency of 60 Hz, +/-0.5; the design agency will verify the power supply for each site.

d. The designer must also ensure who owns and operates the existing electrical system on an Installation. Many Installations have privately owned electrical systems, from which they purchase services. These private electrical companies usually prefer to do all Installation electrical work themselves, since they will own and maintain the system after the range project is completed. Therefore, the designer must include direction in the drawings and specifications so that the construction contractor is aware of his portion of the power work and the private electrical owner's portion of the work. It is common for the project's construction contractor to subcontract directly to the Installation's electrical owner for all or part of a project.

e. Normally the most cost effective way to bring power to a site is via poles. Sometimes training or Installation requirements will dictate that power be brought to the range site below ground. Either of these methods will usually require clearing and grubbing of the power line path. The designer must ensure that this clearing process does not cause environmental effects not addressed in the Environmental Assessment (EA) or Environmental Impact Statement (EIS) for the range projects. Some states interpret the installation of poles as "filling of wetlands".

Communications.

a. This section applies to telephone and fiber optics utilities hookups. If an Installation wants to use existing communication systems, the "short" rule addressed above applies. If the distance to existing communications service is longer than the agreed definition of "short," then the Installation must submit a separate DD 1391 to increase its communication infrastructure. There is no RTLP training requirement for telephone or fiber optics communications between a range and the Installation. There is only one training requirement for communication: a unit training must have two forms of communications available to contact Range Control. These two forms of communication can be hand-held radio, vehicle radio, telephone, cell phone, microwave, etc.

b. If telephones are justified for the project, normally the most cost effective way to bring communications to a site is via poles. Sometimes training or Installation requirements will desire that communications be brought to the range site below ground. Either of these methods will usually require clearing and grubbing of the communications line path. The designer must ensure that this clearing process does not cause environmental effects not addressed in the Environmental Assessment (EA) or Environmental Impact Statement (EIS) for the range projects. Some states interpret the installation of poles as "filling of wetlands".

Water/Sewer.

a. Water and Sewer service to a range project is a rare occurrence. Even though water and sewer services make for a more conventional and comfortable latrine facility; the remoteness of ranges from the Installations existing infrastructure make their use impractical. The volume of use of a range latrine versus the distance to a sewage processing plant is normally too far for efficient waste management. Some installations utilize wells and septic fields. The designer must ensure that the range can comply with local septic field regulations. Due to these issues, most ranges utilize dry-vault latrines or a port-a-john service. If an Installation wants to use water and/or sewage hookups, the "short" rule addressed above applies. There is no RTLP training requirement for water or sewage on a range project; however, any adequate latrine facility must be accessible to the trainees.

b. Non-potable water by hydrant is sometimes required on a range facility for wash downs and dust control. This is usually provided by a well and composes a very low-cost system. If the customer requests a chlorination system on a range facility, the designer should ensure the local regulations and that the Installation's Directorate of Public Works (DPW) are both consulted on requirements and maintenance of the system prior to design.

Propane/Natural Gas. Propane/Natural gas is normally only provided by refillable tanks on a range site. This is a customer decision and should be coordinated with the DPW for any Installation regulations. The designer must ensure that the gas tanks are located in positions where they cannot be hit by tactical vehicles or accidentally shot with a stray round.